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ENFORCEMENT AND ACCOUNTING CONSERVATISM: ANALYSIS OF THE PUBLICLY TRADED COMPANIES FROM G20 MEMBER COUNTRIES

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Resumo/Abstract

This article aims to analyze the influence of countries enforcement on the accounting conservatism of publicly traded companies from G20 member countries. For this purpose, 33,228 non-financial publicly traded companies were analyzed in the period from 2016 to 2020, being classified according to their economic development of the analyzed countries (developed and emerging), as well as the legal system adopted by these economies (common law and civil law). For analysis, panel data regression was performed, using as a basis the conditional conservatism models proposed by Basu (1997) and Ball & Shivakumar (2006). From the comparative analysis of the results, it was possible to show that developed countries tend to show greater conservatism in their accounting numbers, as well as countries with a common law legal system, finding that a more rigorous enforcement tends to make companies present a greater conservatism in their reported results.

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Abstract

This article aims to analyze the influence of countries enforcement on the accounting conservatism of publicly traded companies from G20 member countries. For this purpose, 33,228 non-financial publicly traded companies were analyzed in the period from 2016 to 2020, being classified according to their economic development of the analyzed countries (developed and emerging), as well as the legal system adopted by these economies (common law and civil law). For analysis, panel data regression was performed, using as a basis the conditional conservatism models proposed by Basu (1997) and Ball & Shivakumar (2006). From the comparative analysis of the results, it was possible to show that developed countries tend to show greater conservatism in their accounting numbers, as well as countries with a common law legal system, finding that a more rigorous enforcement tends to make companies present a greater conservatism in their reported results.

Keywords: Accounting Conservatism; Enforcement; Economic development; Legal System.

1 INTRODUCTION

In a scenario of uncertainty, arising from a pandemic that severely affected the economy of several countries, causing a direct impact on the market and business worldwide (Boscá et al., 2021), the quality of accounting information, more precisely accounting conservatism, proved to be a determining factor for the performance of companies in the market, due to its informativeness to external users about the companies' results (Cui et al., 2021). For Cui et al. (2021), more conservative accounting practices provide better stock returns during periods of crisis, such as the consequences from Covid-19 lockdowns and losses, when compared to other companies.

The informative power of companies' accounting conservatism is linked to the conditional way of treating this quality of accounting information, which presuppose that there is a greater verification for the recognition of good news compared to bad news in financial statements (Basu, 1997). This allows the accounting results reported by companies to be a form of early warning for the business in favor of its healthy continuity, recognizing economic losses more quickly than gains (Ball & Shivakumar, 2006). However, the way in which accounting conservatism is adopted by companies may vary according to the different institutional contexts in which the company finds itself (Ball et al., 2000).

Factors such as monitoring of information reported by companies (Hunton et al., 2008), different legal system (Basu, 1997) and national institutional factors (Ball et al., 2000) can affect the quality of reported accounting information, making a more or less conservative decision. This is because more severe enforcement instruments tend to reduce the possibility of discretion in the accounting decision-making process of managers (Dechow et al., 2010), leading to more conservative accounting choices in corporate reporting (Hunton et al., 2008).

The economic development is often linked to the level of enforcement in accounting research and the quality of results due to its legal application strength (Hope, 2003; La Porta et al., 1998). For Duru et al. (2020), developed countries, which have a more rigorous enforcement, generally present higher quality of reported accounting information. This can occur because, in these countries, markets tend to be more efficient (Zada et al., 2021) and with greater predictability (Chen, 2018; Vohra & Fabozzi, 2019), providing results with less discretion and more conservative numbers. In addition, the legal system can affect conditional accounting conservatism (Basu, 1997), causing the way in which the country's laws are applied to have an influence on the incentives for the quality of information reported to external users.

In this context, aiming to compare the accounting conservatism of environments with different levels of economic development, as well as different legal systems, this research seeks to analyze the influence of countries enforcement on the accounting conservatism of publicly traded companies from G20 member countries. From the analysis of these countries in the period from 2016 to 2019 (Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Peru, Russia, Saudi Arabia, South Africa, United Kingdom, United States of America and European Union), segmenting both by economic development and by legal system, it was possible to verify that, as found in the literature, environments with a higher enforcement level, represented in the sample by developed countries and common law, tend to present greater accounting conservatism of profits (Basu, 1997) and accounting numbers (Ball & Shivakumar, 2005) when compared to the others.

Taking into account the different enforcement levels to which developed and emerging countries are affected and the characteristics of the legal environment in which companies operate, it is believed that the study of accounting conservatism in these different markets becomes relevant. In addition, the analysis of this relationship, especially in the scenario that precedes one of the greatest world crises of the century (Boscá et al., 2021), under the two different approaches used in the research (comparing economic development and the legal system), provides a comparison of the evolution of accounting conservatism in the five years preceding the pandemic. This is relevant as it provides support for studies such as the one by Cui et al. (2021), who analyze accounting conservatism as a determining factor for companies and the maintenance of their performance in the market even in periods like this in the pandemic and global crisis scenario, in which the enforcement of each market is one of the key variables in analysis of accounting conservatism.

Another aspect to be highlighted is that the research results help external users of accounting information to understand the way in which the quality of accounting information is obtained in different economic and legal environments in their critical analysis of the information signaled to the market by companies. With this, the study allows analysts and investors in the analyzed markets to optimize their decision-making process based on the reported financial statements, in particular regarding their quality, on the influence of different enforcements on accounting conservatism, based on the comparison of developed and emerging countries, as well as countries that adopt common law and civil law systems.

2 HYPOTHESIS DEVELOPMENT

The quality of accounting information presents several ways to attribute this characteristic to the information, which can be based on the relevance and reliability of the reported numbers (Porter & Norton, 2011), as well as measures that allow the analysis of accounting results, their relevance, timeliness and conservatism in the report (Dechow et al., 2010; Wang, 2006). This accounting information quality literature treats accounting conservatism as an analysis metric under the main conditional and unconditional aspects of accounting results. According to Ball and Shivakumar (2006), although accounting conservatism is a longstanding accounting practice, there is still confusion in the literature about the differences in approaches between unconditional and conditional conservatism, which makes the topic a controversial issue in Accounting.

Unconditional conservatism can be seen as the asymmetric recognition of assets and equity (Ball & Shivakumar, 2006), so that privileging the accounting criterion of presenting less gain for the company and that presents a tendency to recognize greater loss (Basu, 1997). For Beaver and Ryan (2005), this type of conservatism can also be called “ex ante” or news-independent and concerns the undervaluation of assets compared to liabilities. In these cases, companies value over-assets and under- liabilities (Beaver & Ryan, 2005), regardless of macroeconomic factors that might affect such results (Zhong & Li, 2016).

Conditional conservatism, on the other hand, can be conceptualized as a biased recognition that depends on news, or also called “ex post” (Beaver & Ryan, 2005), which assumes that the recognition of losses (bad news) is more easily accepted than gains (good news) for the company (Basu, 1997; Watts, 2003). Thus, businesses that present good news related to their results must undergo greater verifiability than when bad news is announced, as a way of not penalizing potential stakeholders for any expectations in the business that were not actually fulfilled. The greater the level of verification required for earnings, the greater will be the accounting conservatism in recording the transaction (Basu, 1997; Watts, 2003).

Among some of the factors that can influence the conditional conservatism of companies, there is enforcement of the environment in which companies find themselves and their characteristics in relation to their economy and legal system (Ball et al., 2000; Basu, 1997; Hunton et al., al., 2008). According to Duru et al. (2020), the quality of enforcement mechanisms and their level of application, both legally and financially, play a relevant role in the behavior of companies in relation to their results and their financial development. Accounting enforcement is normally carried out by inspection bodies authorized or appointed by the government, with the task of supervising and enforcing compliance with the application of accounting standards to publicly traded companies (Brown et al., 2014). This is so that countries around the world adopting these international accounting standards can report accounting numbers that allow for higher quality and efficient information to stakeholders (Healy & Palepu, 2001).

Previous studies analyzed the way in which enforcement affects the various aspects of accounting information and business performance (Anagnostopoulou, 2017; Brown et al., 2014; Daske et al., 2008; Ernstberger et al., 2012). Daske et al. (2008), based on the analysis of 26 countries, demonstrate that economies with stronger law enforcement had greater incentives to be transparent in their reporting of accounting numbers, providing better quality of financial reports. Along the same lines, the research by Ernstberger et al. (2012), which examined the enforcement of financial reports in Germany, found that when stricter enforcement measures are adopted in the country, there is a reduction in earnings management by publicly traded companies.

In general, it appears that an environment with greater enforcement, the quality of accounting information tends to be higher than the others, with less discretionary accounting numbers (Dechow et al., 2010), as well as greater conservatism in strategic decisions organizations against their reported accounting numbers (Hunton et al., 2008). On the other hand, environments in which enforcement is not properly applied, through rules, laws and regulations, there is a greater incentive for the quality of reported information not to be optimally obtained (Burgstahler et al. 2006; Hope 2003), providing greater discretion in the decision-making process regarding reported numbers.

Based on the literature that showed that in economic environments with greater enforcement there tends to be greater conservatism in accounting numbers, it is relevant to analyze whether these assumptions apply when comparing different countries to each other, especially in the comparative context between the main economies of the world, such as the countries participating in the G20. In this sense, Hypothesis 1 is raised.

H1: Companies traded in countries with greater enforcement show greater conservatism in accounting numbers than others.

A country's economic development is often linked to the level of enforcement in accounting research and the quality of results due to its institutional efficiency of national factors (Ali & Hwang, 2000; Ball, 2006). One of these factors is economic development (Chen, 2018, Vohra & Fabozzi, 2019; Zada, Hassan & Wong, 2021), which is determined by the Gross Domestic Product per capita of a country, in order to classify economies as developed or emerging (Akbas & Sancar, 2021).

The influence of this development on accounting conservatism is linked to the characteristics implicit in these markets, such as efficiency, transparency (Chan, 2014), volatility (Chen, 2018) and risk (Vohra & Fabozzi, 2019). Developed markets tend to be more efficient than

emerging markets (Zada et al., 2021), with greater exchange rate predictability over time (Sharma et al., 2019) and liquidity, with a wide range of risk management instruments (Vohra & Fabozzi, 2019). However, because emerging markets have low investor protection and high risk, accounting conservatism is relevant to facilitate efficient contracting and reduce the risk of their operations (Chan, 2014).

Taking into account that companies traded in developed economies tend to have a higher level of enforcement than emerging countries (Ball et al., 2000; Dechow et al., 2010; Hunton et al., 2008; Watts & Zimmerman, 1983), it is believed that the conservatism of accounting results is greater for companies listed in developed scenarios than in emerging ones, as proposed in Hypothesis 1a (H1a).

H1a: Companies traded in developed countries are more conservative in accounting numbers than companies in emerging countries.

Another aspect that can affect conditional accounting conservatism is the legal system of the environment in which companies are traded and its strength of legal enforcement (Basu, 1997; Hope, 2003; La Porta et al., 1998). According to Ali and Hwang (2000), regardless of a country's legal system, if the juridical system is not working well, accounting enforcement will not be rigorous, leaving room for greater discretion and less conservative numbers. However, the level at which accounting rules are legislated can impact the reported accounting numbers, given that civil law countries tend to denote the minimum requirements and accounting rules in a highly prescriptive and procedural way, while in countries of common law, laws are issued based on common limits, in addition to what is considered illegal, so that the experimentation of managers outside these limits is encouraged (Pacini et al., 2000).

Due to the characteristic of common limits, in addition to the legal prescription of enforcement of countries with a common law legal system, it is believed that there is a greater tendency for the accounting numbers to be conservative, aiming not only to adapt to the legal limits, but also to common limits. Thus, rises Hypothesis 1b (H1b).

H1b: Companies traded in countries adopting the common law legal system are more conservative in their accounting numbers than companies in countries adopting civil law.

3 RESEARCH METHODOLOGY

In order to analyze the influence of countries enforcement on the accounting conservatism of publicly traded companies from G20 member countries, data available in the ThomsonReuters® database for non-financial organizations in the period from 2016 to 2020 were analyzed. It was decided not to analyze the accounting conservatism of financial institutions together with the other companies under analysis due to their differentiated capital structure and with specific regulation, aiming to provide greater comparability between the analyzed companies (Peasnell et al., 2000). Still, the analysis from the last years of accounting conservatism is relevant so that the aspects and idiosyncrasies that precede the environment of uncertainty at a global level started in 2020 with the Coronavirus pandemic (COVID-19) can be captured.

In order to carry out the enforcement analysis of the companies in the sample, two proxies were used: economic development (Chen, 2018, Vohra & Fabozzi, 2019; Zada, Hassan & Wong, 2021) and the adopted legal system (Basu, 1997; Pacini et al., 2000) of countries in which organizations trade their shares. Therefore, in order to analyze these aspects separately, the sample was divided into four clusters, the first two being related to developed and emerging countries, and the last two corresponding to the legal system of common law and civil law. In favor of disclosing the number of companies of the sample, as well as their respective representation in each cluster examined (Table 1).

Table 1
Sample Composition

Economic development	Legal sistem	G20 members	Sample		Total			
			N	%	N	%		
Developed countries	civil law	European Union	5,265	(15.8%)	11,017	(33.2%)	22,508	(67.7%)
		Japan	2,792	(8.4%)				
		Germany	1,037	(3.1%)				
		France	790	(2.4%)				
		Russia	717	(2.2%)				
		Italy	416	(1.3%)				
	commom law	USA	5,354	(16.1%)	11,491	(34.6%)		
		Canada	2,488	(7.5%)				
Australia		2,049	(6.2%)					
United Kingdom		1,600	(4.8%)					
Emerging Countries	civil law	India	4,303	(12.9%)	10,372	(31.2%)	10,720	(32.3%)
		China	3,930	(11.8%)				
		Indonesia	737	(2.2%)				
		Brazil	506	(1.5%)				
		Peru	400	(1.2%)				
		South Africa	348	(1.0%)				
		Saudi Arabia	213	(0.6%)				
		Mexico	177	(0.5%)				
	commom law	Argentina	106	(0.3%)	348	(1.0%)		
Sample						33,228		

Regarding the estimation of the accounting conservatism of the analyzed companies, the conditional conservatism model was used, adapting the models proposed by Basu (1997) and Ball and Shivakumar (2006). The analysis through these two models is relevant since the Basu model (1997) makes it possible to analyze the conservatism of accounting results based on market measures, such as earnings per share and price per share. The model of Ball and Shivakumar (2006), on the other hand, uses internal variables related to changes in accounting net income as result proxies.

In this sense, for the analysis of the model adapted from Basu (1997), two proposed equations were used, which correspond to the analysis of the general sample (Equation 1) and the analyzes of each cluster (DEV = Developed; EMER = Emerging; COML = common law; CIVL = civil law) separately (Equation 2).

$$(X_{it}/P_{it-1}) = \alpha + \beta_1 DR_{it} + \beta_2 R_{it} + \beta_3 DR_{it} * R_{it} + \sum \beta_j Sector_i + \sum \beta_j DEV_i + \sum \beta_j COML_i + \sum \beta_k DEV_i * DRT_{it} + \sum \beta_w DEV_i * RT_{it} + \sum \beta_y DEV_i * DRT_{it} * RT_{it} + \sum \beta_k COML_i * DRT_{it} + \sum \beta_w COML_i * RT_{it} + \sum \beta_y COML_i * DRT_{it} * RT_{it} + \sum \beta_z G20_i + \varepsilon_{it} \quad (1)$$

$$(X_{it}/P_{it-1}) = \alpha + \beta_1 DR_{it} + \beta_2 R_{it} + \beta_3 DRT_{it} * RT_{it} + \sum \beta_j Sector_i + \sum \beta_z G20_i + \varepsilon_{it} \quad (2)$$

Where: X_{it} = earnings per share of company i in year t ; P_{it-1} = price per share of company i in year $t-1$; DR_{it} = negative economic return dummy for company i in year t , assigning 1 and the economic return is negative and 0 if the economic return is positive or null; R_{it} = economic return per share of company i in year t , represented by $(P_{it}-P_{it-1})/P_{it-1}$; DEV_{it} = economic development dummy, being 1 for developed countries and 0 for emerging countries; $COML_{it}$ = legal system dummy adopted, being 1 for common law legal system and 0 for civil law; α = Intercept term; β_2 = Reflects accounting profit opportunity, as the recognition of economic return through accounting profit; β_1 and β_3 = Reflect the asymmetric recognition of the economic return to good and bad news, by accounting profit; ε_i = Error term of the regression. It should be noted that all non-binary variables were winsorized at a 1% to treat outliers.

For the analysis of the accounting conservatism level using the Basu model (1997), the bad news interaction coefficient ($DR_{it} * R_{it}$, $DEV_{it} * DR_{it} * R_{it}$ and $COML_{it} * DR_{it} * R_{it}$) and its signal to the dependent variable. This is because, according to the author who proposed the model, conservatism

implies that the β_3 coefficient is positive, since bad news (negative return) must be reflected in profit to a greater extent than good news (positive return).

As in the accounting conservatism model through market measures (Basu, 1997), the use of the adapted model by Ball & Shivakumar (2006) was carried out based on two equations, a general one (Equation 3) and for each of the enforcement clusters analyzed (Equation 4).

$$\begin{aligned} \Delta NI_{it} = & \alpha + \beta_1 D\Delta NI_{it} + \beta_2 \Delta NI_{it-1} + \beta_3 \Delta NI_{it-1} * D\Delta NI_{it-1} + \Sigma \beta_j Sector_i + \Sigma \beta_j DEV_i + \Sigma \beta_j COML_i + \\ & \Sigma \beta_k DEV_i * D\Delta NI_{it} + \Sigma \beta_w DEV_i * \Delta NI_{it-1} + \Sigma \beta_y DEV_i * \Delta NI_{it-1} * D\Delta NI_{it-1} + \Sigma \beta_k COML_i * D\Delta NI_{it} + \\ & \Sigma \beta_w COML_i * \Delta NI_{it-1} + \Sigma \beta_y COML_i * \Delta NI_{it-1} * D\Delta NI_{it-1} + \Sigma \beta_z G20_i + \varepsilon_{it} \end{aligned} \quad (3)$$

$$\Delta NI_{it} = \alpha + \beta_1 D\Delta NI_{it} + \beta_2 \Delta NI_{it-1} + \beta_3 \Delta NI_{it-1} * D\Delta NI_{it-1} + \Sigma \beta_j Sector_i + \Sigma \beta_z G20_i + \varepsilon_{it} \quad (4)$$

Where: ΔNI_{it} = change in accounting net income of company i from year t-1 to year t; ΔNI_{it-1} = change in accounting net income of company i from year t-2 to year t-1; $D\Delta NI_{it-1}$ = dummy of negative variation in the accounting net income of company i from year t-1 to year t, assigning 1 for $\Delta NI < 0$ and 0 for other cases; DEV_{it} = economic development dummy, being 1 for developed countries and 0 for emerging countries; $COML_{it}$ = legal system dummy adopted, being 1 for common law legal system and 0 for civil law; α = Intercept term; ε_i = Error term of the regression. It should be noted that all non-binary variables were winsorized at a 1% level to treat outliers.

Unlike Basu's (1997) accounting conservatism analysis, Ball & Shivakumar's (2006) model assumes that the model can be explained by means of the coefficient of determination (R^2). The analysis logic in this case is based on assumptions both of persistence of accounting results and of bad news represented by the dummy variable of negative net income return. Based on this, the R^2 results for each cluster are compared, so that the greater the explanatory nature of the model, the greater the level of conservatism of the accounting results.

Through the operationalization in the Stata® Software, multiple regression was performed in an unbalanced panel, as well as the model specification tests (Hausman, Breusch-Pagan and Chow), denoting the fixed effects model as the most adequate. Through the tests of multicollinearity (VIF: 1.33), heteroscedasticity (p-value: 0.000) and autocorrelation (p-value: 0.000), it was verified the need to use a methodology that would provide robust standard errors and, therefore, it was decided to use the fixed effect per G20 member country. From the analysis of data normality, we chose to use Spearman's correlation matrix for non-parametric data. In addition, the sample comparison tests used (Kruskall-Wallis by country and Mann-Whitney by development and by legal system) showed significant differences between the analyzed samples, highlighting the need to analyze these realities separately.

4 RESULTS AND DISCUSSION

Table 1 presents the descriptive statistics of the dependent variables of the conditional accounting conservatism models of Basu (1997) and Ball and Schivakumar (2006), corresponding to the weighted earnings per share (X_t/P_{t-1}) and the variation in earnings net (ΔNI_t), respectively. It should also be noted that the variables were winsorized at the level of 1%.

Table 2
Descriptive statistics

Variable	Metric	Developed	Emerging	Common Law	Civil Law	Total
X_t/P_{t-1}	Observations	80.130	41.015	44.900	76.245	121.145
	Average	3.312	4.151	4.792	2.892	3.596
	Standard deviation	6.259	5.632	7.309	5.069	6.067
	Minimum	-0.017	-0.017	-0.017	-0.017	-0.017
	Maximum	19.359	19.359	19.359	19.359	19.359
	Mann-Whitney		***		***	

Variable	Metric	Developed	Emerging	Common Law	Civil Law	Total
ΔNI_t	Observations	13.095	5.373	7.987	10.481	18.468
	Average	-0.225	-0.234	-0.231	-0.225	-0.228
	Standard deviation	0.301	0.218	0.324	0.240	0.280
	Minimum	-0.826	-0.826	-0.826	-0.826	-0.826
	Maximum	0.170	0.170	0.170	0.170	0.170
	Mann-Whitney		***		***	

Notes. ***, **, * is significant at 1%, 5% and 10%, respectively.

Based on the data from Table 1, it is possible to verify that the market result variable, analyzed by earnings per share (X_t/P_{t-1}), it is verified that although there is a higher average of market indicator in emerging countries of the in developed economies, the variability (standard deviation) of profit values in developed economies is greater than in emerging ones, denoting more diversified and efficient markets (Zada et al., 2021). Still, when analyzing the legal system, it is evident that the countries adopting the common law show the highest profits, as well as the greatest variability of profits of the companies that make up these markets.

Regarding the variation in the accounting profit of the companies under study, it is possible to show that, on average, the sample showed a drop in its accounting profit over the last five years, denoting negative averages of variation in earnings for all analyzed scenarios. However, as observed for the earnings per share variable, the highest standard deviation was evidenced for developed economies and common law, which can be explained by the tendency of these countries to show greater conservatism in accounting results arising from their characteristics enforcement and monitoring (Basu, 1997; Dechow et al., 2010; Hunton et al., 2008).

It is noteworthy that to analyze the difference in means of the research dependent variables in comparison with enforcement by economic development and legal system proxies, the Mann-Whitney test was preceded to compare non-parametric samples, showing a significant difference between the developed and emerging countries, as well as common law and civil law adopters.

In order to verify the linear association between the research variables, the Spearman correlation matrix was used for the variables of the conditional conservatism models analyzed (Table 3).

Table 3
Spearman's Correlation Matrix

	Economic development			Legal Sistem		
	ΔNI_t	X_t/P_{t-1}	ΔR_{t-1}	ΔNI_t	X_t/P_{t-1}	ΔR_{t-1}
ΔNI_t	1	-0.0790***	0.0346**	1	-0.1224***	0.1350***
X_t/P_{t-1}	-0.0352***	1	0.0163	-0.0516***	1	-0.1964***
ΔR_{t-1}	0.0613***	-0.0016	1	0.0192*	0.0631***	1

Notes. developed and common law on the left and bottom of the matrix; emerging and civil law in the right and upper part of the matrix; ***, **, * is significant at 1%, 5% and 10%, respectively.

Through Table 3, it is possible to notice that the greater correlation between the variation of the return and the variation of the accounting profit in the developed scenarios, which may be an indication that the returns, in these markets, tend to better explain its result than in emerging economies, in line with the literature that claims that in these more rigid enforcement environments, companies show greater conservatism in their results (Ball et al., 2000; Dechow et al., 2010; Hunton et al., 2008; Watts & Zimmerman, 1983).

Next, Table 3 elucidates the results arising from the panel data regression for both models of conditional conservatism object of study, with the fixed effects of the countries that make up the sample.

Table 4
Regression in the Conditional Conservatism Panel of the G20 Countries

X_t/P_{t-1}	Basu (1997)					$\Delta N I_t$	Ball e Schivakumar (2006)				
	(1) General	(2) DEV	(3) EMER	(4) COML	(5) CIVL		(6) General	(7) DEV	(8) EMER	(9) COML	(10) CIVL
Constant	3.229***	2.056***	4.266***	19.914***	1.078***	Constant	0.069**	0.159***	-0.049***	0.287***	-0.033***
DR _t	-0.370***	1.036***	-0.076**	3.073***	-0.092***	$\Delta \Delta N I_t$	-0.187***	-0.322***	-0.130***	-0.505***	-0.131***
ΔR_{t-1}	-0.991***	-0.768***	-2.201***	-2.096***	-0.551***	$\Delta N I_{t-1}$	-0.244***	-0.131***	0.079***	-0.189***	0.050***
DR _t * ΔR_{t-1}	3.221***	3.928***	10.957***	9.298***	2.711***	$\Delta \Delta N I_t^* \Delta N I_{t-1}$	1.486***	1.571***	0.678***	1.630***	0.923***
DEV	-1.277***					DEV	-0.003				
COML	1.998***					COML	0.076**				
DR _t *DEV	0.892***					$\Delta \Delta N I_t^* DEV$	0.006				
$\Delta R_{t-1}^* DEV$	-0.098					$\Delta N I_{t-1}^* DEV$	0.119***				
DR _t * $\Delta R_{t-1}^* DEV$	2.927***					$\Delta \Delta N I_t^* \Delta N I_{t-1}^* DEV$	0.066				
DR _t *COML	1.920***					$\Delta \Delta N I_t^* COML$	-0.174***				
$\Delta R_{t-1}^* COML$	-46.197***					$\Delta N I_{t-1}^* COML$	0.234***				
DR _t * $\Delta R_{t-1}^* COML$	138.304***					$\Delta \Delta N I_t^* \Delta N I_{t-1}^* COML$	-0.801***				
Sector	-0.025***	-0.073***	0.001	-0.397***	0.023***	Sector	0.006***	0.007***	0.004***	0.011***	0.004***
Australia	7.330***	9.290***				Australia					
Canada	4.262***	5.173***		-9.901***		Canada	-0.054***	-0.051***		-0.040*	
European Union	1.553***	1.558***		-13.560***	1.123***	European Union	-0.012	0.001		-0.01	0.011
France	0.108	0.129			0.042	France					
Italy	0.858***	0.803***			0.780***	Italy	-0.017	-0.003			
Japan	-0.545***	-0.621***			-0.317***	Japan	0.018	0.040***			0.039***
Russia	2.482***	2.821***			1.213***	Russia	-0.042	-0.028			-0.004
United Kingdom	2.473***	2.824***		-11.689***		United Kingdom	-0.028**	-0.032**		-0.031*	
U.S.A.	0.918***	1.064***		-14.903***		U.S.A.	-0.002	-0.002		-0.001	
South Africa	0.962**			-13.064***		South Africa	0.008			0.044	
Saudi Arabia	-2.104***		-3.148***		-0.419***	Saudi Arabia	0.025		0.052**		0.060***
Argentina	2.612***		1.102**		2.774***	Argentina	-0.076		-0.063**		-0.049*
Brazil	-0.716***		-1.974***		0.462***	Brazil	-0.047		-0.021		-0.011
China	0.648***		-0.597**		1.862***	China	0.037		0.035**		0.054***
India	1.012***		-0.329		1.753***	India	-0.002		0.02		0.032***
Indonesia	12.791***		9.174***		6.505***	Indonesia	-0.043		0.002		0.008
Mexico	-0.351		-1.495***		0.999***	Mexico	-0.023		0.019		0.025
Peru			-1.048***		1.439***	Peru			0.016		0.028
Observations	121.145	80.130	41.015	44.900	76.245	Observations	11.131	8.225	2.906	5.004	6.127
Firm	26.164	17.390	8.774	9.912	16.252	Firm	6.657	4.390	2.267	2.627	4.030
R ²	0.027	0.009	0.015	0.007	0.016	R ²	0.549	0.591	0.282	0.685	0.285

Notes. DEV = Developed; EMER = Emerging; COML = common law; CIVL = civil law. Fixed effect by country. ***, **, * is significant at the 1%, 5% and 10% level, respectively.

From Table 4, it is possible to verify that the results arising from the models of Basu (1997) and Ball and Shivakumar (2006) were different in relation to the highest levels of accounting conservatism. In Basu's model (1997), which analyzes accounting conservatism based on the interaction of the negative return dummy and the return from previous periods ($DR_t^* \Delta R_{t-1}$), more conservative results are shown (significant at 1% and with the higher economic coefficients) for the accounting numbers of emerging countries, when compared to developed ones, both in the scope of the general regression (1), with the interactions, as well as in the scope of separate analysis of each of the economic development samples (2 and 3). This result is in line with what is recommended in the literature regarding countries with a higher level of enforcement (in this case, the developed ones), which would present more conservative results when compared to markets with less rigorous enforcement. However, it can be a form of compensation for companies analyzed in these emerging markets, considering the relevance of more conservative accounting numbers to facilitate efficient contracting and reduce the risk of operations in these markets (Chan, 2014).

Differently from the result obtained in the Basu model (1997), the analysis through the variation of net income based on Ball and Schivakumar (2006) showed results that meet expectations, so that developed countries have a higher coefficient of determination of the model (R^2) than emerging countries. This leads us to believe that these countries, in which enforcement is more rigorous, given greater protection for investors in these markets (Chan, 2014), providing more conservative accounting figures. These results are in line with the assumptions raised in the literature regarding the quality of accounting information and enforcement level (Ball et al., 2000; Dechow et al., 2010; Hunton et al., 2008; Watts & Zimmerman, 1983), providing support that hypothesis 1a (H1a) cannot be rejected.

As for the legal system, as expected, both models analyzed showed that countries adopting common law show greater conservatism of accounting results than countries that adopt civil law. These results are supported both from the point of view of general modeling with interaction (1 and 6), and in the analysis of separate samples of the legal system (4 and 5 - 9 and 10), reinforcing the relevance of the legal system in the quality of the reported accounting information, as recommended by current literature (Basu, 1997; Hope, 2003; La Porta et al., 1998), so that Hypothesis 1b (H1b) cannot be rejected.

In this context, in general, as expected, it appears that in an environment where there is a more rigorous enforcement, the reported accounting numbers tend to be more conservative and, therefore, with greater quality of accounting information for external users. Thus, for the sample of countries analyzed, the hypothesis that companies traded in countries with greater enforcement show greater conservatism in accounting numbers than the others (H1) cannot be rejected.

5 CONCLUSION

The research aimed to analyze the influence of countries enforcement on the accounting conservatism of publicly traded companies from G20 member countries in the period from 2016 to 2020, focusing on their economic development (developed and emerging), as well as their system legal (common law and civil law). Therefore, it used conditional accounting conservatism estimation models, based on Basu (1997) and Ball and Schivakumar (2006), through unbalanced panel data regression for more than 33 thousand companies analyzed.

As a result, although Basu's (1997) model presents distinctions in relation to the assumptions in the literature and findings with the application of the Ball & Shivakumar (2006) model, in general, companies that are present in developed markets and, consequently, with stricter enforcement when compared to emerging economies, presented greater conservatism in reported accounting results. From the point of view of the legal system, the results demonstrate, for both analyzed models, a higher accounting conservatism for companies adopting common law, as expected.

In this context, the results lead us to believe that, in the comparative analysis between the G20 member countries, the level of enforcement is relevant in the accounting conservatism of the numbers reported by the companies, contributing to the literature on the theme of accounting information quality of companies that are constant in environments with different enforcement against the use of international accounting standards. From that, the research makes it possible to broaden the debate not only on aspects involving the quality of accounting information and its maximization, but also the discussion of the relevance of proxies to be used for the comparative analysis of enforcement between different countries and markets.

The results help to understand both the macroeconomic aspects that affect the quality of the accounting information reported, but how, eventually, the users of accounting information from companies traded in markets considered with less rigorous enforcement can pay attention to aspects of the quality of accounting results of these companies and the relevance of this information, especially for understanding and planning these stakeholders in scenarios of greater uncertainty such as the global crisis of covid-19 in environments considered to have lower enforcement levels.

It is noteworthy that, although the research can serve as an evolutionary parameter of accounting conservatism for the companies under study, the research does not intend to analyze only the pandemic period and its pre- and post-crisis divergences, which is one of the limitations of the research. Therefore, it is suggested that future studies explore not only how these different levels of economic development and legal systems may be affected in periods before and after the crisis resulting from the pandemic, encompassing the characteristics of accounting information quality and, more precisely, of conservatism of the reported numbers, during this confrontation.

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